

REMARKS/ARGUMENTS

Claims 1-38 were previously pending in the application. Claims 35-38 are amended. The Applicant hereby requests further examination and reconsideration of the application in view of the foregoing amendments and these remarks.

Claims 35-38 are amended to delete figure references. These amendments are not made to avoid any prior-art rejections.

On page 2, the Examiner rejected claims 1-4, 6, and 19-22 under 35 U.S.C. § 103(a) as being unpatentable over Huang in view of Tsang. On page 3, the Examiner objected to claims 5, 7-18, and 23-38 as being dependent upon a rejected base claim, but indicated that those claims would be allowable if rewritten in independent form. For the following reasons, the Applicant submits that all pending claims are allowable over the cited references.

Independent claim 19 is directed to a circuit comprising (a) an image sensor having at least one photoelement implemented in an integrated circuit and (b) other circuitry. When illuminated with light, the photoelement generates charge that is then applied to the other circuitry to reduce power consumption from a power supply.

On page 2, the Examiner stated that “Huang discloses ... generating charge [and] is silent to the details of the CMOS circuit.” Huang teaches a circuit having two ports (e.g., ports 305 and 405 in Fig. 1) adapted to receive complementary voltage signals. For example, when port 305 receives a voltage corresponding to a high state, port 405 receives a voltage corresponding to a low state, and vice versa. When the voltages applied to ports 305 and 405 are reversed, the circuit of Huang is capable of reducing power consumption from a power supply by first redistributing between the ports charge corresponding to the initial voltages, substantially without drawing additional charge from a power supply, and then driving the ports to their new voltages using the power supply (Figs. 2 and 3). Note that, prior to the charge redistribution, the initial charge was similarly drawn from the power supply. As such, the circuit of Huang does not generate charge, but rather, it simply recycles charge previously drawn from the power supply. In addition, Huang is very particular about the circuit details by specifying for example that his circuit can operate only with complementary voltage signals (see, e.g., col. 1, lines 56-61). In contrast, circuits of the present invention are adapted to generate charge and are in no way limited to complementary signals. Therefore, the Applicant submits that the Examiner mischaracterized the teachings of Huang and used them improperly to reject claim 19.

Even if the Examiner characterized the teachings of Huang properly, which the Applicant does not admit, to reject claim 19, the Examiner combined those teachings with the teachings of Tsang. In doing so, on page 2, the Examiner stated:

Tsang discloses an active pixel sensor using CMOS technology that includes a CMOS circuit (col. 1, line 7) with a photodiode (138, Fig. 2) to generate charge. It would have been obvious to one having ordinary skill in the art at the time of invention to include a photodiode as a means to provide charge to the circuit.

The Applicant submits that the Examiner provided no reason or motivation as to why one skilled in the art would be motivated to combine the teachings of Huang and Tsang. On one hand, while it is true that Tsang teaches an active pixel sensor having a photodiode, nowhere in the specification does Tsang teach or even suggest recycling charge in any manner or applying charge generated by the photodiode to other circuitry to reduce power consumption. On the other hand, the teachings of Huang have nothing to do

with image sensors. Huang does not teach or even suggest that his "CMOS circuitry" has any image sensor in it and there is no motivation whatsoever to add an image sensor to Huang's circuitry.


A modification and/or combination of reference teachings is improper unless the prior art suggests such a modification or combination. See, e.g., In re Bond, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990) (the PTO erred in rejecting the claimed invention as an obvious combination of the teachings of two prior art references when the prior art provided no teaching, suggestion or incentive supporting the combination); Smithkline Diagnostics, Inc. v. Helena Laboratories Corp., 859 F.2d 878, 887, 8 USPQ2d 1468, 1475 (Fed. Cir. 1988) (a challenger to the validity of a patent "cannot pick and choose among the individual elements of assorted prior art references to create the claimed invention."; the challenger "has the burden to show some teaching or suggestion in the references to support their use in the particular claimed combination."); In re Mills, 916 F.2d 680, 682, 16 USPQ2d 1430, 1432 (Fed. Cir. 1990) (although a prior art device "may be capable of being modified to run the way [the patent applicant's] apparatus is claimed, there must be a suggestion or motivation in the reference to do so."); In re Laskowski, 871 F.2d 115, 117, 10 USPQ2d 1397, 1398 (Fed. Cir. 1989) ("Although the Commissioner suggests that [the structure in the primary prior art reference] could readily be modified to form the [claimed] structure, "[t]he mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification.").

For all these reasons, the Applicant submits that the Examiner improperly used the cited references to reject independent claim 19. The Applicant therefore submits that claim 19 is allowable over the cited references. For similar reasons, the Applicant submits that independent claim 1 is allowable over the cited references. Since the rest of the claims depend variously from claims 1 and 19, it is further submitted that those claims are also allowable. The Applicant submits therefore that the rejections of claims under § 103(a) have been overcome.

In view of the above amendments and remarks, the Applicant believes that the now pending claims are in condition for allowance. Therefore, the Applicant believes that the entire application is now in condition for allowance, and early and favorable action is respectfully solicited.

Respectfully submitted,

Date: 5/11/04
Customer No. 22186
Mendelsohn & Associates, P.C.
1515 Market Street, Suite 715
Philadelphia, Pennsylvania 19102


Yuri Gruzdakov
Registration No. 50,762
Agent for Applicant
(215) 557-8544 (phone)
(215) 557-8477 (fax)